

REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 1-3 and 5-7 are now pending in this application, with Claim 1 being the sole independent claim. By this Amendment, Applicant has amended Claims 1 and 5, and canceled Claim 4. No new matter has been added.

The drawings stand objected to inasmuch as the Office Action states that they contain blank boxes and other shapes which require the use of a suitable legend. Accompanying this Amendment is a Submission of Replacement Drawings including amended drawings which incorporate the features required by the Examiner.

Claim 6 stands objected to as being dependent on rejected base claim, but would be allowable if rewritten in independent form. Applicant has left that claim in dependent form inasmuch as Applicant believes the independent claim from which it depends is allowable for the reasons set forth below.

Claims 1-5 and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,627,669 (Orino, et al.) in view of U.S. Patent Publication No. 2002/0051270 A1 (Tatsuno, et al.). Applicant traverses this rejection.

As recited in independent Claim 1, Applicant's invention is directed to an optical space transmitter including a light source, an optical system, a temperature detector, control means, and angle correcting means. The light source emits a light beam modulated according to a signal to be transmitted. The optical system sends out the light beam emitted from the light source as a transmission light beam with an angle of expansion. The temperature detector detects the internal temperature of the optical space transmitter. The control means controls the optical space transmitter such that the angle of expansion increases when the internal temperature detected by the temperature detector rises. In

addition, angle correcting means corrects the angular displacement between the light beam to be transmitted and a received light beam.

Thus configured, Applicant's invention includes (i) means to control the optical space transmitter to increase the angle of expansion with a rise in the internal temperature, and (ii) means for correcting the angular displacement between light beams.

The Office Action acknowledges that Orino, et al. does not disclose a temperature detector for detecting the internal temperature of an optical space transmitter, or means for changing the angle of expansion of a transmission beam as a function of a detected temperature. The Office Action notes, however, that Orino, et al. states that changes in temperature effect a position of a light beam. In addition, the Office Action notes that Tatsuno, et al. describes means for changing an angle of divergence of a light beam. Thus, the position set forth in the Office Action is that Orino, et al. and Tatsuno, et al. could be combined to achieve the present invention. Applicant respectfully disagrees.

The present invention primarily solves the problem of thermal displacement of a mechanism for detecting a partner device which is mounted in an optical space transmitter/receiver. For example, this problem could be the thermal expansion or the shrinkage of a lens barrel, or the like. As noted in the Office Action, Orino, et al. discusses thermal displacement of a light beam. If, as proposed in the Office Action, the disclosure of Orino, et al. is combined with the angle correction mechanism of Tatsuno, et al., only one portion of the present invention would be addressed. Specifically, such a combination could provide angle correcting means for correcting angular displacement of a light beam, as recited in independent Claim 1. Still, however, neither of those documents address the problem of thermal expansion of a lens barrel or the like which occurs with the temperature change the optical transmitter. Thus, Applicant submits that those documents do not describe or suggest detecting the internal temperature of an optical space transmitter and controlling the angle of expansion based on that internal temperature.

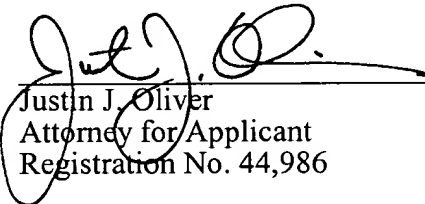
Accordingly, Applicant submits that Orino, et al. and Tatsuno, et al., taken alone or in combination, fail to disclose or suggest at least the features of a temperature detector for detecting the internal temperature of an optical space transmitter, and control means for controlling the optical space transmitter such that the angle of expansion increases when the internal temperature detected by the temperature rises, as recited in independent Claim 1.

For the foregoing reasons, Applicant submits that independent Claim 1 is allowable over the documents of record. The remaining claims in the present application are dependent claims which depend from independent Claim 1, and thus are patentable over the applied documents for reasons noted above with respect to that independent claim. In addition, each recites features of the invention still further distinguishing it from the applied documents. Applicant requests favorable and independent consideration thereof.

In view of the comments above, Applicant requests withdrawal of the rejection under 35 U.S.C. § 103.

Applicant's undersigned attorney may be reached in our Washington D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,


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